

## **REMARKS**

This is a full and timely response to the outstanding final Office Action mailed January 16, 2007. Claims 1-25 are pending in the present application. Reconsideration and allowance of the application and pending claims are respectfully requested.

### **1. Response to Objections of the Specification**

The Office Action provides guidelines which "are suggested for the applicant's use." Page 2. While Applicant acknowledges the suggestions made in the Office Action and the MPEP, these do appear to indicate a preferred style and not required rules. However, to advance prosecution, the specification has been amended to add section headings and is believed to comply with all matters of form. Therefore, Applicant respectfully requests withdrawal of the objections.

### **2. Response To Rejections of Claims Under 35 U.S.C. § 101**

Claims 1, 12, and 19-22 have been rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. More specifically, the claims are allegedly directed to abstract ideas.

With regard to claim 1, Applicant traverses the rejection, since claim 1 recites parsing an XML document into constituent parts and storing these parts in a table of a relational database. As such, the document is transformed into a different state or thing which meets the statutory requirement of 35 U.S.C. § 101.

Further, with the constituent parts being stored in the relational database, these parts, such as attribute and element information, are retrievable by query from the relational database which is a useful, tangible, and practical result which meets the statutory requirement of 35 U.S.C. § 101.

For similar reasons, claims 12 and 19-22 also comply with 35 U.S.C. § 101. Therefore, Applicant respectfully requests withdrawal of these rejections, as well. Further, with respect to claims 20-22, the claims are directed to a computer readable medium carrying a program executed by a computer which is statutory subject matter. For example, "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and

the medium which permit the data structure's functionality to be realized, and is thus statutory." See MPEP 2106.

**3. Response To Rejections of Claims Under 35 U.S.C. § 112**

Claims 1, 12, 19, and 20-22 have been rejected under 35 U.S.C. § 112, First Paragraph, as allegedly failing to comply with the enablement requirement. The Office Action states that the claims contain subject matter which is not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. In particular, the Office Action objects to the use of the terms "absolute" or "absolutely" in the claims. Applicant respectfully traverses the rejection.

"Absolute" and "absolutely" are terms that are well known in areas involving relational databases. For example, High-Tech Dictionary (at <http://www.computeruser.com/resources/dictionary/definition.html?lookup=1415>) describes an "absolute reference" as follows:

In a spreadsheet, a reference to one specific cell, rather than a relative reference which would indicate the placement of a cell in reference to the current cell (for example, four rows above in the same column). Since cell references in a spreadsheet are relative references by default, an absolute reference must be indicated; this is done by different codes in different programs, but often by adding a dollar sign: \$A42, \$B\$12.

Accordingly, the present application does enable the claimed subject matter because the specification describes an absolute reference for the hierarchical position of a node. For example, in Table 4, the Node ID provides an absolute reference for the hierarchical position of a node, and the combination of the Node ID and the 'Name' field providing a unique and absolute identifier for a node within a document. Accordingly, Applicant respectfully submits that one of ordinary skill in the art is enabled to make and/or use the claimed subject matter. Therefore, withdrawal of the rejections is respectfully requested.

**4. Response To Rejections of Claims Under 35 U.S.C. § 102**

Claims 1-22 have been rejected under 35 U.S.C. § 102(a) as being anticipated by *Tatarinov* ("Storing and Querying Ordered XML Using a Relational Database System"). Applicant respectfully traverses this rejection.

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore &*

*Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed subject matter must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(a). In the present case, not every feature of the claimed subject matter is represented in the *Tatarinov* reference. Applicant discusses the *Tatarinov* reference and Applicant's claims in the following.

a. **Claim 1**

As provided in independent claim 1, Applicant claims:

A method of storing an XML document in a relational database comprising:

***(a) parsing each node of the XML document into constituent parts, including parsing elements and, where an element has an attribute, the attribute of that element;***

***(b) associating a unique identifier with a respective parsed node of the document which identifies, absolutely, the hierarchical position of the node in the document; and***

***(c) storing each parsed constituent part of each node with its identifier in a table of a relational database.***

(Emphasis added).

Applicant respectfully submits that independent claim 1 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "parsing each node of the XML document into constituent parts, including parsing elements and, where an element has an attribute, the attribute of that element" and "storing each parsed constituent part of each node with its identifier in a table of a relational database," as recited and emphasized above in claim 1.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the attributes are not stored separately and are not, therefore, retrievable by a query. Further, it is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "parsing each node of the XML document into constituent parts, including parsing elements and, where an

element has an attribute, the attribute of that element" and "storing each parsed constituent part of each node with its identifier in a table of a relational database," as recited in claim 1.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 1. Therefore, claim 1 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

**b. Claims 2-11**

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-11 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-11 contain all the features of independent claim 1. For at least this reason, the rejections of claims 2-11 should be withdrawn.

**c. Claim 12**

As provided in independent claim 12, Applicant claims:

A relational database comprising  
***a table having an node field for storing each parsed constituent part of each node of an XML document including elements and, where an element has an attribute, the attribute of that element; and***

an identifier field for storing an identifier associated with each respective node stored in the node field, wherein the identifier identifies, absolutely, the hierarchical position of the node in the document.

(Emphasis added).

Applicant respectfully submits that independent claim 12 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "a table having an node field for storing each parsed constituent part of each node of an XML document including elements and, where an element has an attribute, the attribute of that element," as recited and emphasized above in claim 12.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the

attributes are are not stored separately and are not, therefore, retrievable by a query. Further, it is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "a table having an node field for storing each parsed constituent part of each node of an XML document including elements and, where an element has an attribute, the attribute of that element," as recited in claim 12.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 12. Therefore, claim 12 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

**d. Claims 13-18**

Because independent claim 12 is allowable over the cited art of record, dependent claims 13-18 (which depend from independent claim 12) are allowable as a matter of law for at least the reason that dependent claims 13-18 contain all the features of independent claim 12. For at least this reason, the rejections of claims 13-18 should be withdrawn.

**e. Claim 19**

As provided in independent claim 19, Applicant claims:

A method of writing an XML document comprising:

***(a) reading data from a relational database which is representative of constituent parts of each node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element;***

(b) generating predetermined software events for respective read nodes; and

(c) passing the software events to a content handler which is arranged to translate each software event into a written node of the XML document, each written node being associated with a unique identifier which identifies, absolutely, the hierarchical position of a respective written node in the document.

(Emphasis added).

Applicant respectfully submits that independent claim 19 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "reading data from a relational database which is representative of constituent parts of each

node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited and emphasized above in claim 19.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the attributes are not stored separately and are not, therefore, retrievable by a query. It is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "reading data from a relational database which is representative of constituent parts of each node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited in claim 19.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 19. Therefore, claim 19 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

**f. Claim 20**

As provided in independent claim 20, Applicant claims:

A computer readable medium carrying a program which when executed on a computer causes storing of an XML document in a relational database by:

***(a) parsing each node of the XML document into constituent parts, including parsing elements and, where an element has an attribute, the attribute of that element;***

***(b) associating a unique identifier with a respective parsed node of the document which identifies, absolutely, the hierarchical position of the node in the document; and***

***(c) storing each parsed constituent part of each node with its identifier in a table of a relational database.***

(Emphasis added).

Applicant respectfully submits that independent claim 20 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "(a) parsing each node of the XML document into constituent parts, including parsing

elements and, where an element has an attribute, the attribute of that element" and "(c) storing each parsed constituent part of each node with its identifier in a table of a relational database," as recited and emphasized above in claim 20.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the attributes are not stored separately and are not, therefore, retrievable by a query. It is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "parsing each node of the XML document into constituent parts, including parsing elements and, where an element has an attribute, the attribute of that element" and "storing each parsed constituent part of each node with its identifier in a table of a relational database," as recited in claim 20.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 20. Therefore, claim 20 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

**g. Claim 21**

As provided in independent claim 21, Applicant claims:

A computer readable medium carrying a program which when executed on a computer causes storing of an XML document in a relational database by:

(a) receiving software events representing respective parsed nodes of the XML document;

(b) associating a unique identifier with the respective parsed nodes of the document which identifies, absolutely, the hierarchical position of the node in the document; and

***(c) storing constituent parts of each node of the document with its identifier in a table of a relational database, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element.***

(Emphasis added).

Applicant respectfully submits that independent claim 21 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "storing

constituent parts of each node of the document with its identifier in a table of a relational database, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited and emphasized above in claim 21.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the attributes are not stored separately and are not, therefore, retrievable by a query. It is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "storing constituent parts of each node of the document with its identifier in a table of a relational database, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited in claim 21.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 21. Therefore, claim 21 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

**h. Claim 22**

As provided in independent claim 22, Applicant claims:

A computer readable medium carrying a program which when executed on a computer causing writing of an XML document by:

***(a) reading data from a relational database which is representative of constituent parts of each node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element;***

(b) generating predetermined software events for respective read nodes; and

(c) passing the software events to a content handler which is arranged to translate each software event into a written node of the XML document, each written node being associated with a unique identifier which identifies, absolutely, the hierarchical position of a respective written node in the document.

(Emphasis added).



Applicant respectfully submits that independent claim 22 is allowable for at least the reason that *Tatarinov* does not disclose, teach, or suggest at least "reading data from a relational database which is representative of constituent parts of each node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited and emphasized above in claim 22.

While *Tatarinov* describes "Global Ordering," *Tatarinov* does not concern itself with a complete parsing of an XML document. Thus, once an XML document is parsed and stored in a relational database in accordance with the teaching of *Tatarinov*, it is not possible to perform certain queries on the database. More particularly, *Tatarinov* does not parse the document for its attributes. As a result, the attributes are not stored separately and are not, therefore, retrievable by a query. It is noted that attributes can frequently contain important semantic content within a document which is not capable of being retrieved by *Tatarinov*. For at least this reason, *Tatarinov* fails to teach or suggest "reading data from a relational database which is representative of constituent parts of each node of the XML document, the constituent parts comprising any elements of the node and, where an element has an attribute, the attribute of that element," as recited in claim 22.

As a result, *Tatarinov* does not teach or suggest at least all of the claimed features of claim 22. Therefore, claim 22 is not anticipated by *Tatarinov*, and the rejection should be withdrawn for at least this reason alone.

## **5. Newly Added Claims**

Claims 23-25 have been newly added to further define and/or clarify the scope of aspects of the present disclosure. Claims 23-25 are dependent from independent claims 1, 20, or 21. Accordingly, their patentability follows directly from the patentability of claims 1, 20, or 21. Additionally, these dependent claims recite further features and/or combinations of features (as is apparent by examination of the claim itself) that are patentably distinct from the cited art of record.

The favorable reconsideration and allowance of claims 23-25 are respectfully requested. Support for the new claims may be found on at least page 5 of the present application.

### **CONCLUSION**

For at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,

  
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Charles W. Griggers, Reg. No. 47,283